

**Work Order ID 72095**

Page 1

Tuesday, July 19, 2011 10:25:03 AM

Item ID: D205-634-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 7/19/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/5/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_

Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D2580-041

Rev.D DEO-D1

100

0.00



DOCUMENT CONTROL

DC

0.00

Document Control

Memo

Photocopy D205-634 bluefile &amp; type labels per PPP D205-634-041 CHG004

002

N/A

110

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio 16

2-Cut tubes as per Dwg. D2580

3- scribe batch# in aft end of tube

BE 11/08/22

SAD 11-08-22

①

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

120

0.00



Skidtubes

Memo

0.00

Skidtubes

1- Deburr ends and remove bending marks

2- Prepare tube for swaging as per QS1 002

①

B 11/08/23

130

0.00



QC

QC5- Inspect part completeness to step on W/O

Memo

0.00

Quality Control

D

11-8-23

W/O:		WORK ORDER CHANGES					
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Run Start



Stop



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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

140

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Weld step D2576 as per Dwg. D2580 and QSI004

A/R□□□ Aluminum Rod

M115778

BE 11/08/24

2-Grind welds on step as per Dwg D2580

BE

3-Insert D4202-1 spacer, swage as per QSI002 and trim/ grind flush per QSI002 and dwg. Hold x-bolt with DT9701 Use tube expander 1/2 x 17G to start expansion and finish with 1/2 x 18G to achieve dwg dimension.

BE 11/08/24

WELDED

A/R M115778

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64", adjust stopper not to hit web. Deburr

DR 11/08/24

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Deburr

BE 11/08/24

150

0.00



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

Memo

0.00

5 11/08/25

W/O:		WORK ORDER CHANGES					
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Page 4

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Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

170

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.

180

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

3:45  
320°F  
4:15

m117745

H D M-11/08/29

IX D M-11/08/29

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Page 5

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Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop

Sequence ID/  
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DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 of 11 11/08/30

W/O:		WORK ORDER CHANGES					
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Page 6

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SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

200

0.00



HandFinish

Hand Finishing

**Memo**

0.00

1-Install inserts &amp; wearplates &amp; Gaskets as per Dwg. D2580. Use a drop of

Sikaflex on insert holes before installing wearplates

A/R ☐ ☐ ☐ Sikaflex-291 ☐ 1118393

Sikaflex expire date: 12/05

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step &amp; Aft Cap with

Sikaflex. Clean excess adhesive

A/R ☐ ☐ ☐ Sikaflex-291 ☐ 1118393

Sikaflex expire date: 12/05

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch: 1118313

1 0 1118393

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Page 7

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Required Date: 8/5/2011 Req'd Qty: 1.00

Reference:

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Setup Start



Stop



Cust Item ID:

Customer:

Run Start



Stop



Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

210



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

0.00

S u 108/31

220



Packaging

Packaging

Packaging

0.00

Memo

Identify and pack for shipping as per PPPD205-634-041

Location:

PPP Rev:

0.00

PPPD2289

11/8/11

230



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

u1917

mf 11-09-07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Tuesday, July 19, 2011 10:25:09 AM

Page 1

Work Order ID: 72095

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube



Start Date: 7/19/2011

Required Date: 8/5/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30  
 KJ IPP Rev P 10.02.19  
 per PAR09-043 EC verified by:DD  
 IPP Rev. O 06.02.28 Added paperwork EC  
 IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM IPP Rev:Q  
 10.12.01 as per chg003 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
<del>D4202-1</del> <b>D2579</b>  Spacer		Manufactured	No			140	Each	443.0000	20	20			
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div> <div> <div>LG002</div> <div>443</div> <div></div> </div> <div> <div>66929</div> <div>106</div> <div></div> </div> <div> <div>67129</div> <div>196</div> <div></div> </div> <div> <div>67308</div> <div>1</div> <div></div> </div> <div> <div>67430</div> <div>140</div> <div></div> </div>													
D2580-1  205 Skidtube bent detail		Manufactured	No			110	Each	3.0000	1	1			
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div> <div> <div>LG</div> <div>2</div> <div></div> </div> <div> <div>71014</div> <div>2</div> <div></div> </div> <div> <div>ST046</div> <div>1</div> <div></div> </div> <div> <div>70785</div> <div>1</div> <div></div> </div>													
D2576-3  Step (maching detail)		Manufactured	No			140	Each	44.0000	1	1			
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div> <div> <div>LG</div> <div>44</div> <div></div> </div> <div> <div>66156</div> <div>44</div> <div></div> </div>													

BE 11/08/24  
B 72672 x20

BE 11/08/22  
B 72840 x1

BE 11/08/24

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Page 2

Work Order ID: 72095

Parent Item: D205-634-041


Parent Item Name: Replacement Skidtube

Start Date: 7/19/2011


Required Date: 8/5/2011

Start Qty: 1.00


Required Qty: 1.00


D2855      Manufactured      No      200      Each      39.0000      1      1  
 u108130  
 Cap

Location	Loc Qty	Loc Code
FP007	39	
53791	4	
65519	2	
65569	33	X1

AN3-5A      Purchased      No      200      Each      1,055.000      2      2  
 u108130  
 Bolt

Location	Loc Qty	Loc Code
ST350	1055	
115371	279	
117423	776	V2

AN960JD10L      NAS1149D0332J      Purchased      No      200      Each      0.0000      2      2  
 u108130 u1117087  
 Washer

ALS7-1032-130      Purchased      No      200      Each      1,075.000      50      50  
 u108130  
 Insert

Location	Loc Qty	Loc Code
ST282	1075	
117717	1075	u1118237

Tuesday, July 19, 2011 10:25:10 AM

Shop Packet Print

Page 2

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Start Date: 7/19/2011

Required Date: 8/5/2011


Start Qty: 1.00

Required Qty: 1.00

AN3C4A Purchased No 200 Each 1,552.000 50 50  
  
 BOLT


Location	Loc Qty	Loc Code
ST350	1552	
117313	2	1118628
117688	488	
117795	500	
117872	22	
118012	500	
118112	40	

Handwritten: 11/08/30

AN960C10L NAS1149C0332 Purchased No 200 Each 0.0000 50 50  
  
 washer


Handwritten: M118306 = 2814  
 M118354 = 36

Handwritten: 11/08/30

D3566-13 Manufactured No 200 Each 21.0000 1 1  
  
 Gasket

Handwritten: 11/08/30

Location	Loc Qty	Loc Code
FP	20	
69281	20	B72144
FP014	1	
68341	1	

D3566-5 Manufactured No 200 Each 20.0000 1 1  
  
 Gasket

Handwritten: 11/08/30

Location	Loc Qty	Loc Code
FP015	20	
68961	8	B72844
71601	12	

Handwritten: 11/08/30

Tuesday, July 19, 2011 10:25:10 AM

Shop Packet Print

Page 3

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Start Qty: 1.00

Required Qty: 1.00

D3566-1 Manufactured No 200 Each 32.0000 2  
  
 Gasket


 11/08/30


Location Loc Qty Loc Code

FP011 30  
 70769 18  
 71580 12

372848 x2

FP015 2  
 68924 2


D3564-11 Manufactured No 200 Each 4.0000 1  
  
 Wearshoe


 11/08/30

Location Loc Qty Loc Code

FP019 4  
 67591 4

372207 x1


D3564-13 Manufactured No 200 Each 22.0000 1  
  
 Wearshoe


 11/08/30

Location Loc Qty Loc Code

FP016 11  
 69280 11  
 FP017 11  
71594 11

x1

D3564-9 Manufactured No 200 Each 9.0000 1  
  
 Wearshoe

 11/08/30

Location Loc Qty Loc Code

FP019 9  
 67590 4  
 69943 5

372208 x1

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Page 5

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Start Date: 7/19/2011

Required Date: 8/5/2011

Start Qty: 1.00

Required Qty: 1.00

D3564-5

Manufactured No

200

Each

19.0000

1

1



Wearshoe



1108130

Location

Loc Qty

Loc Code

FG

2

34806

2

B72164

1108130

FP019

17

70864

17

D2594-3

Manufactured No

200

Each

780.0000

16

16



O-Ring, 205 Skidtube



1108130

Location

Loc Qty

Loc Code

FP-A

780

65518

54

66952

726

1108130

D2594-1

Manufactured No

200

Each

233.0000

16

16



Plug, 205 Skidtube



1108130

Location

Loc Qty

Loc Code

FP-A

233

42807

28

67441

7

68943

198

B72127

1108130

Tuesday, July 19, 2011 10:25:11 AM

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Page 5

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





DESIGN #	DRAWN BY RH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2580	REV. 0 SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

RELEASED  
07.06.28 #

DEO ATTACHED  
UNDER REVIEW

PHOTO  
RMV 11.06.30

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

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SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 77095

11-07-19

#### GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
SEE NOTES ON  
PAGE 2 FOR D2580-041 AND  
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

RELEASED  
07-06-28

~~DEO ATTACHED~~  
RMV 4/11.06.30

Technical drawing of a circular base plate with a central hole and a rectangular cutout. The drawing includes dimensions and labels for components and assembly steps:

- Dimensions:**
  - $\phi 0.208$  (Central hole diameter)
  - 0.40 (Distance from center to the start of the rectangular cutout)
- Labels and Assembly Steps:**
  - DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)
  - AN3-SA BOLT (1)
  - AN960JD10L WASHER (1)
  - (2 PLACES)
  - D2855 CAP
  - SEAL WITH SIKAFLEX-241/-291

Diagram of a wheel assembly with labels:

- D2579 SPACER
- D2596 WEB (REF)
- ALS7-1032-130 (REF) (TYP 50 PLACES)
- AFTER PERFORM
  1. CHA
  2. INS
  3. WEL
  4. C'B

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

37.50  
DISTANCE TO AFT END OF D2596 WEB

3  
7

1.750 1.750

#0.508 (TYP.)  
(40 PLACES)

REFER TO DETAIL A

8.750 17.375 26.000 34.188 57.313 (REF)  
7 EQUAL SPACES  
8.168 PITCH

38.0 91.500 190.0  
(D2500-1)

Figure 1: Typical cross-section of a road with a 4% grade. The diagram shows a road profile with a 4% slope. Key dimensions include a 1.4m vertical offset at the start, a 1.0m distance between the hole and the tangent point, a 13.4m horizontal distance from the start to the hole, a 20.0m horizontal distance from the hole to the end of the section, a 1.0m distance between the hole and the tangent point, and a 32.0 ± 1.0m total horizontal distance. A 4% grade is indicated at both ends. A vertical curve is shown with a radius of 10.640m.

[illegible]

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DART AEROSPACE LTD.

CHECKED	<i>[Signature]</i>
DATE	07.02.27

PH  
APPROVED  
H

DRAWING NO.	D2580
TITLE	205 SKIDTUB

REVISIONS

SHEET 2 OF 2

ASSEMBLY

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

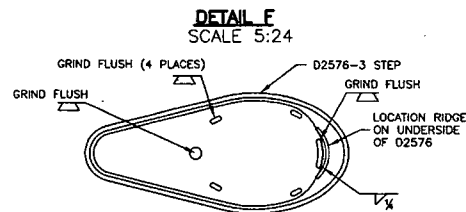
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

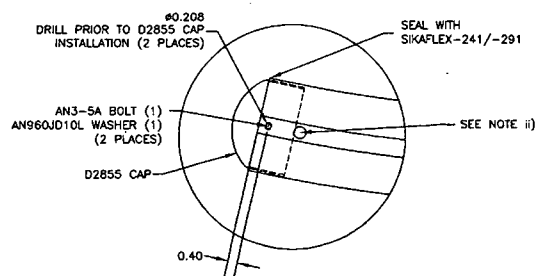
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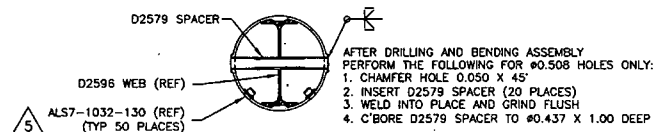
11.06.30  
RmV 011.06.30



RMV 68.06.30



**SECTION H-H**  
**SCALE 5:24**



i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE  
WITH THE SPACER AT THIS LOCATION

37.50  
DISTANCE TO AFT END  
OF D2596 WEB  
3 7  
REFER TO DETAIL A  
1.750 1.750  
8.750  
17.375  
26.000  
34.188  
57.313 (REF)  
7 EQUAL SPACES  
8.188 PITCH  
91.500  
190.0  
(D2500-1)  
#0.508 (TYP.)  
(40 PLACES)  
REFER TO DETAIL E

51.340 39.580 5.915 20.0 13.4 32.0 ± 1.0

5.985 5.338 (REF) 3.630 (REF) #0.508 (8 PLACES) #0.640

1.4

1.0 DISTANCE BETWEEN HOLE AND TANGENT POINT

1.0 DISTANCE BETWEEN HOLE AND TANGENT POINT

4

4

WELD AS PER DETAIL F

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

0.5

1.5

1.5

H

NO C'BORE NO PLUG

NO C'BORE NO PLUG

8

1.5

1.5

1.5

P

H

P

P

P

P

P

P

NO C'BORE NO PLUG

D3566-1

D3566-5

D3566-1

D3566-13

D3564-11

D3564-5

D3564-9

D3564-13




AN3C4A BOLT (1)

AN960C10L WASHER (1)

(50 PLACES)

DESIGN

DRAWN BY

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				D2580	SHEET 3 OF 3
		DATE	TITLE	SCALE	
		07.02.27	205 SKIDTUBE ASSEMBLY		1:24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Linda Lacelle

From: dshepherd@dartaero.com  
Sent: April 18, 2011 11:36 AM  
To: Linda Lacelle; Mike Petsche  
Cc: Bill Beckett; 'Chris Provencal'; 'Eric Charbonneau'  
Subject: Re: Alum. Solution Anneal - swaging

Makes sense to me ... We don't want to get caught short ... Make sure that if we do this, they are ident the old CHG number.

David

Sent from my BlackBerry device on the Rogers Wireless Network

From: "Linda Lacelle" <llacelle@dartaero.com>  
Date: Mon. 18 Apr 2011 11:21:10 -0400  
To: 'Mike Petsche' <mpetsche@dartaero.com>; <dshepherd@dartaero.com>  
Cc: 'Bill Beckett' <bbeckett@dartaero.com>; 'Chris Provencal' <cprovencal@dartaero.com>; 'Eric Charbonneau' <echarbonneau@dartaero.com>  
Subject: RE: Alum. Solution Anneal - swaging

I am ready to weld some up, I don't want to get into trouble with L/T's on these, any objections??

From: Mike Petsche [mailto:mpetsche@dartaero.com]  
Sent: April 18, 2011 10:42 AM  
To: 'Linda Lacelle'; dshepherd@dartaero.com  
Cc: 'Bill Beckett'; 'Chris Provencal'; 'Eric Charbonneau'  
Subject: RE: Alum. Solution Anneal - swaging

Well I'm not sure what to say.

It is my understanding that the swaging will still make sense even with the extra hoops we need to jump throu

if there is still uncertainty on the delivery of the material, we CAN still weld them if we need to.

And while this might be less than "world class", couldn't we take some of our tubing that we have in stock and with the welder to knock down the temper a little? Ground clamp on one end, torch on the other.....BZZZZZZZ

(I'm only sort of joking.....because I bet it would work)

From: Linda Lacelle [mailto:llacelle@dartaero.com]  
Sent: April 18, 2011 9:44 AM  
To: dshepherd@dartaero.com; 'Mike Petsche'  
Cc: Bill Beckett; Chris Provencal; Eric Charbonneau  
Subject: RE: Alum. Solution Anneal - swaging  
Importance: High

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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NO. 262

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: B71946  
Part number: D205 634 041  
Description: 205  
Welding Process: Tig ☒ Mig ☐  
Base material: Aluminum  
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐  
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐  
Undercut: pass ☒ fail ☐  
Pin holes: pass ☒ fail ☐  
Overlap (cold lap): pass ☒ fail ☐  
Porosity (surface): pass ☒ fail ☐  
Coloration: pass ☒ fail ☐

Qualifier Barclay Elliott Date of Test Coupon 11-08-11  
Welder Barclay Elliott Date of Test Coupon 11-08-11

The above named individual is qualified in accordance with AWS D17.1.2001 to weld